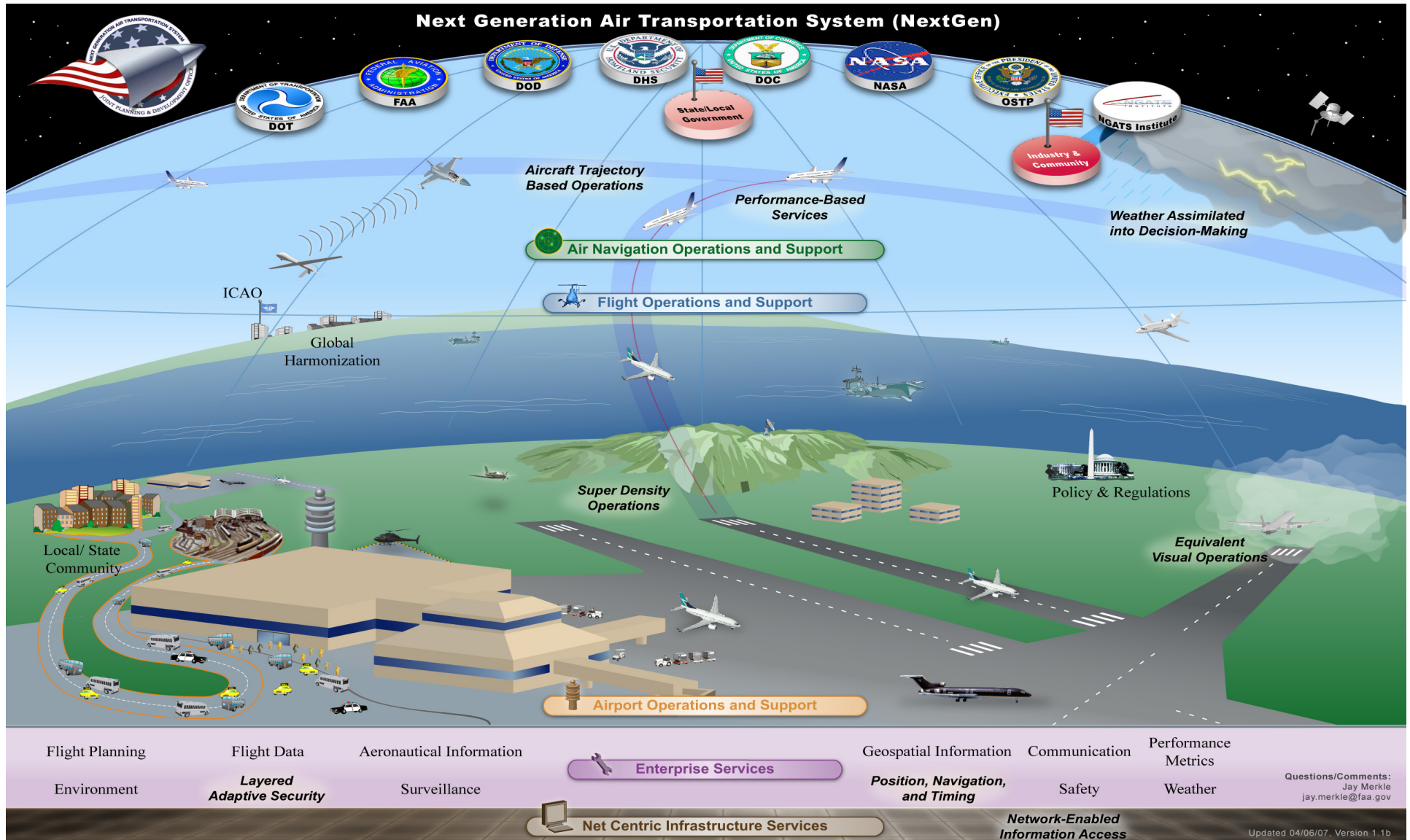


# Joint Planning and Development Office Overview v.1 NextGen Weather

**Mark Andrews**

JPDO Weather Working Group Government Co-Chair

# NextGen 101



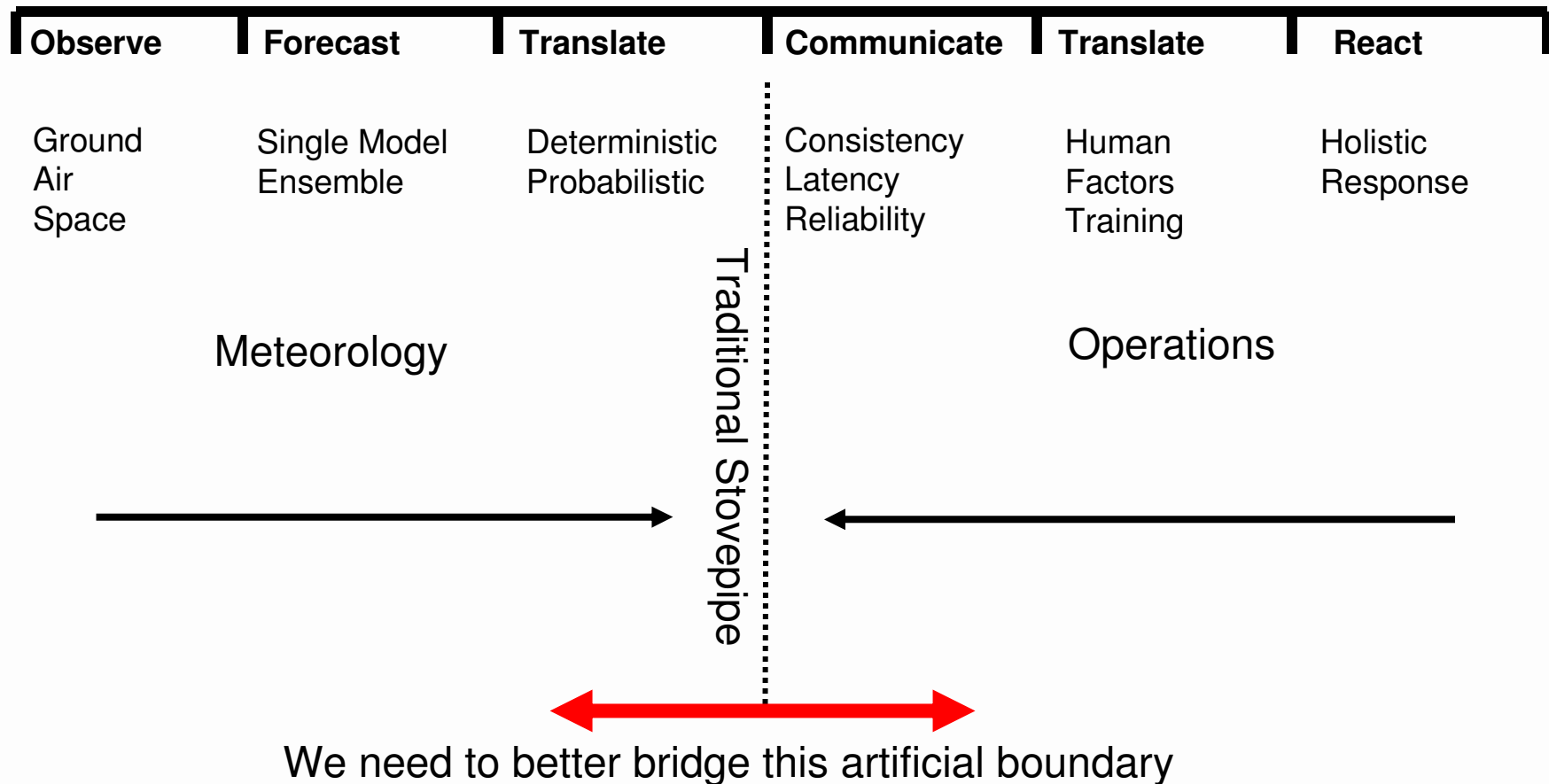
# NextGen 101

- Weather accounts for 70% of all air traffic delays within the U.S. National Airspace System (NAS)
  - The Federal Aviation Administration (FAA) has determined two-thirds of this is preventable with better weather information
- "A key finding, based on an analysis of several 2005-2006 convective events, is that as much as two-thirds of the weather-related delay is potentially avoidable."

Research, Engineering and Development Advisory Committee;  
Report of the Weather-ATM Integration Working Group;  
Oct 3, 2007



# Perfect Forecast Process: The Neglected Problem



# Today Versus NextGen Weather Information Attributes

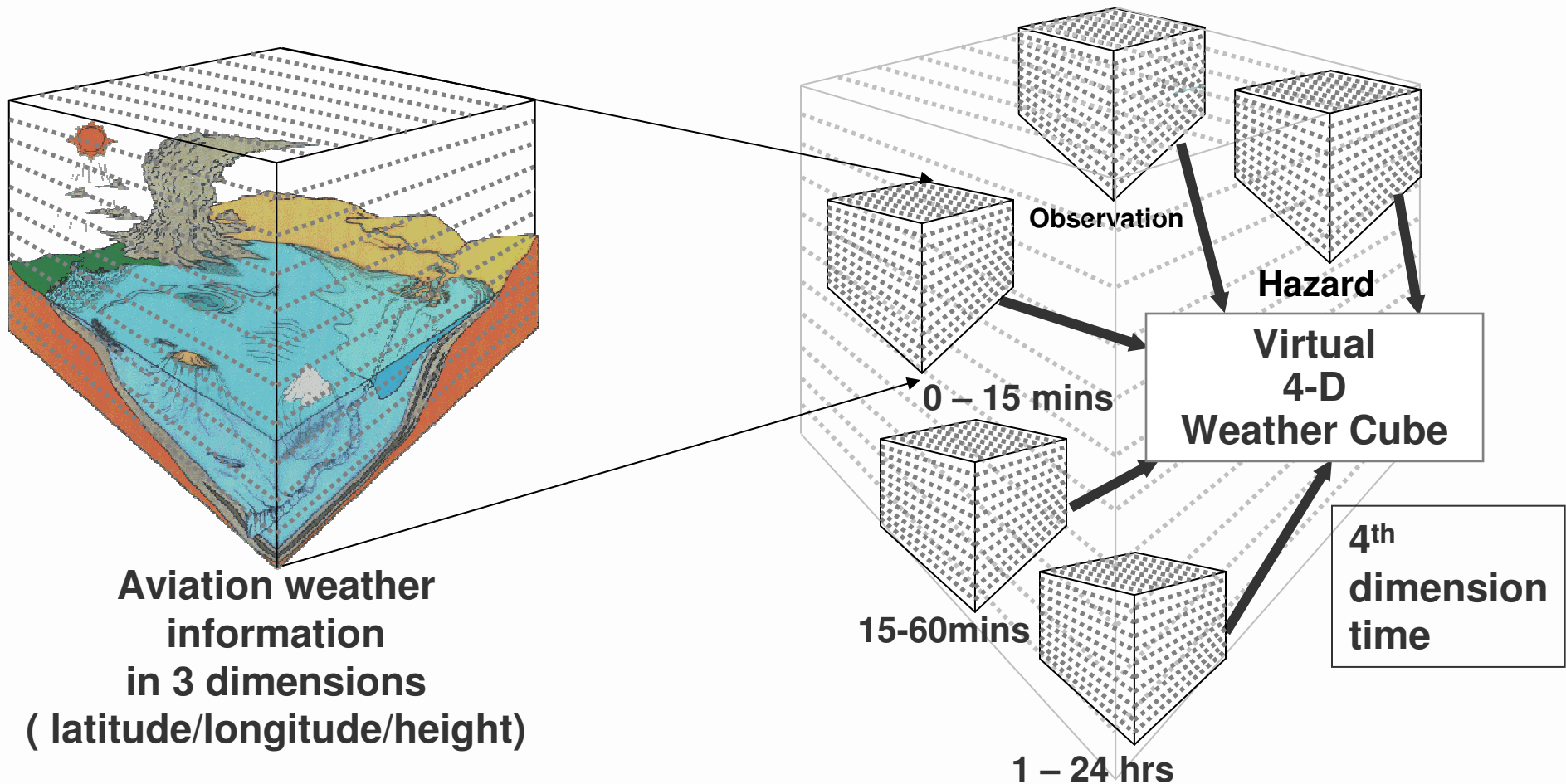
## Today

## NextGen

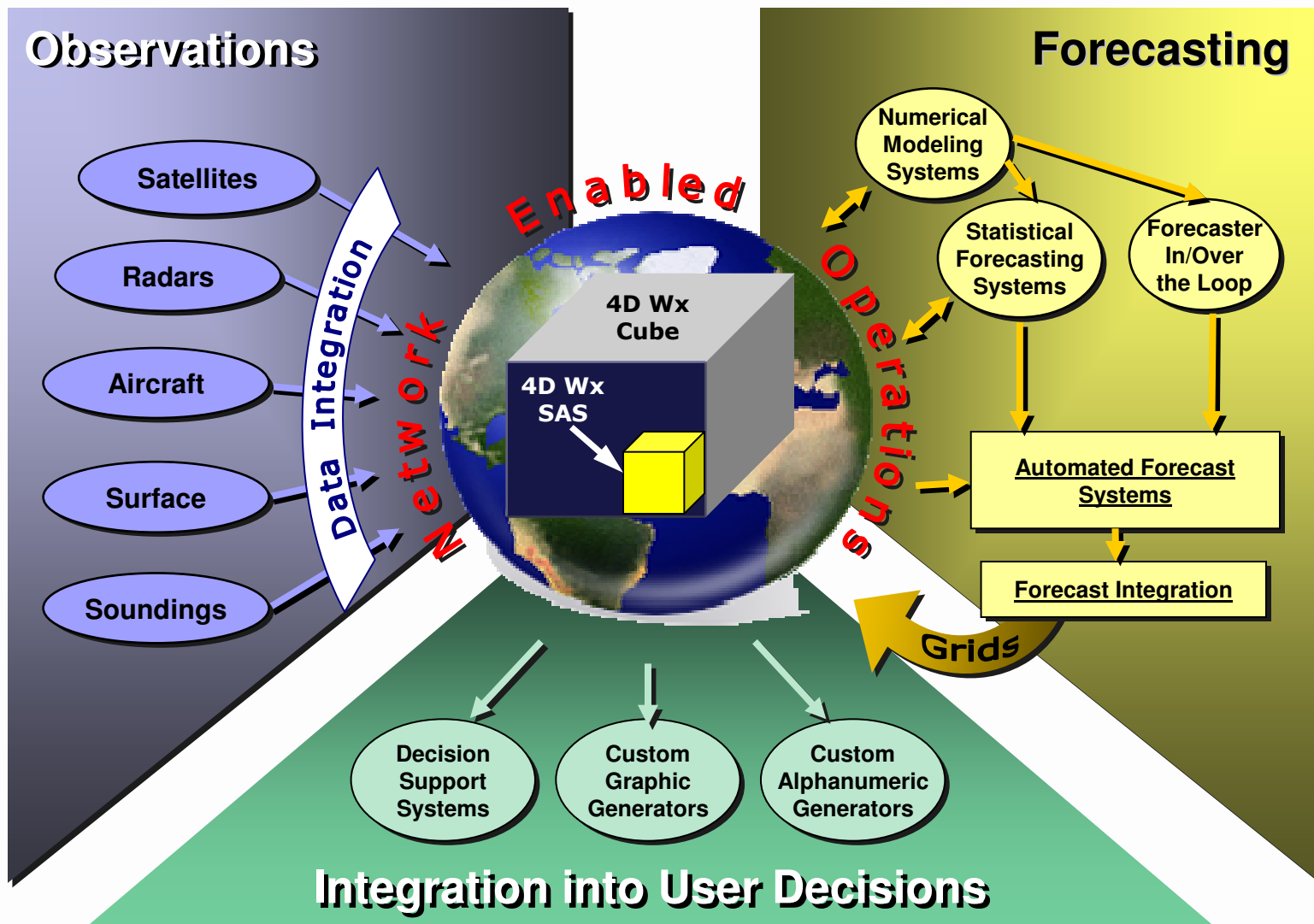
• Not integrated into aviation decision support systems (DSS)	• Totally integrated into DSS
• Inconsistent/conflicting on a national scale	• Nationally consistent
• Low-temporal resolution (for aviation decision making purposes)	• High-temporal resolution
• Disseminated in minutes	• Disseminated in seconds
• Updated by schedule	• Updated by events
• Fixed product formats (graphic or text)	• Flexible formats



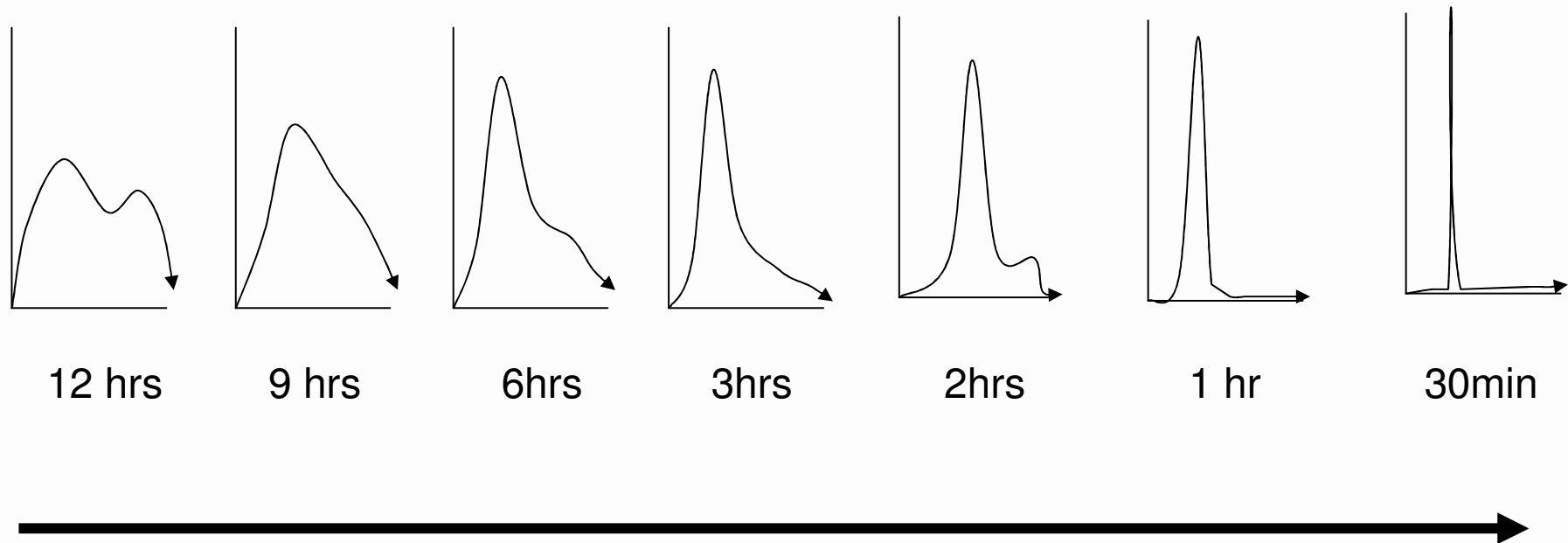
# Virtual Four-Dimensional (4-D) Weather Cube



# 4-D Weather Cube: A Conceptual Model

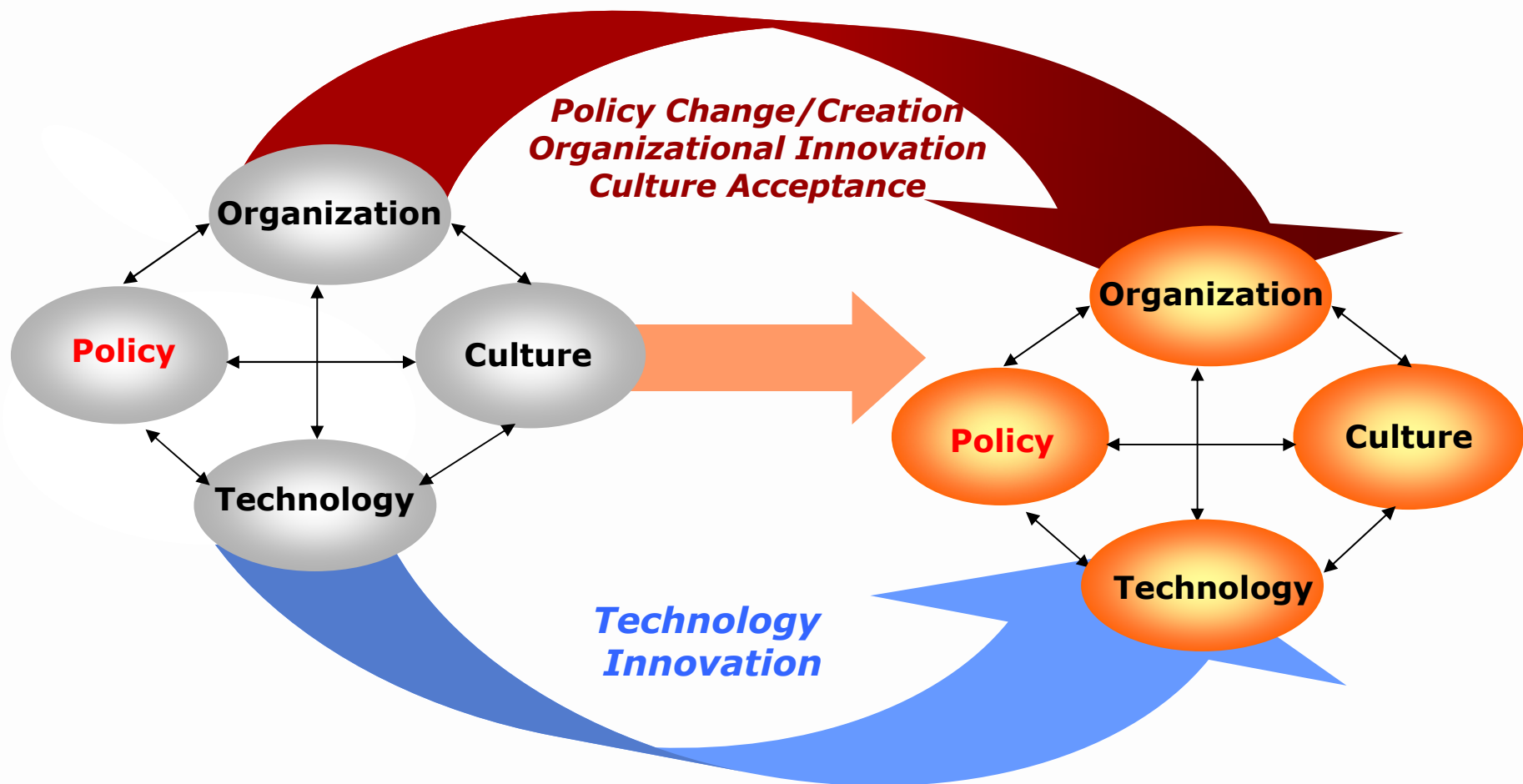


## Probabilistic Information (Reliability Versus Accuracy)





# System-Wide Transformation Requires Innovation Across All Lines of Development



# Multiple Path Approach

